

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026273**Date Inspected:** 14-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**East Line**

This QA randomly observed ABF/JV qualified welder Fred Kaddu #2188 performing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU. This was a Complete Joint Penetration (CJP) weld on a 14mm plate insert at the A deck to close the lifting lug deck penetration holes. This work was located at E3-PP104-L#1&3 and was performed in the flat position from the top of the A deck plate.

During welding, ABF Quality Control (QC) Fred Vonhoff was noted monitoring the welding parameters. Welding parameters were recorded as (A=135).

This QA randomly observed ABF/JV qualified welder Jorge Lopez #6149 performing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1110A-R1. The joint being welded was a 14mm plate insert at the A deck to close the lifting lug deck penetration holes. This work was located at E4-PP101-L#2, 4 and was performed in the overhead position from the inside of the A deck plate.

During welding, ABF Quality Control (QC) Fred Vonhoff was noted monitoring the welding parameters.

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Welding parameters were recorded as (A=127).

This QA randomly observed ABF/JV qualified welder Salvador Sandoval #2202 performing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1010-R1. The joint being welded is a 20mm plate insert at the A deck to close a man way deck penetration hole. This work was located at 8E-PP61.5-E5 and was performed in the overhead position from the inside of the A deck plate.

During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters. Welding parameters were recorded as (A=117).

11E/12E

This QA randomly observed ABF/JV qualified welder Wai Kit Li #2953 performing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1000-R. . The joint being welded was in the 3G vertical position at the side plate E1/E2 on the outside of the OBG 11E/12E.

Measurements are recorded in millimeters.

E2 (external)

Indication (Y=3860), Excavation (Y=3885, L=90, W=20, D=11)

During welding, ABF Quality Control (QC) Pat Swain was noted monitoring the welding parameters. Welding parameters were recorded as (A=126).

This QA observed QC Pat Swain performing Ultrasonic Testing (UT) of the Complete Joint Penetration (CJP) designated 11E/12E side plate E1/E2 from the internal side.

Testing is in process and no reports QC have been filed at this time.

### Ultrasonic Testing

This QA Inspector performed Ultrasonic Testing (UT) of approximately 50% of the weld repair area previously tested by QC Ultrasonic technicians. The joint is a Complete Joint Penetration (CJP) welded by Jorge Lopez #6149 utilizing the Shielded Metal Arc Welding (SMAW) with 5/32" diameter E7018HR4 electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU. This work was located at E4-PP103-L#1~4 and was performed in the flat position from the top of the A deck plate.

This QA observed no rejectable indications at the time of testing. This QA Inspector generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

This QA also performed Ultrasonic Testing (UT) on approximately 20% of 11E/12E CJP bottom plate splice weld previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3.

This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

Included in this testing percentage are the first and second time repairs (R1/R2) that were previously rejected by

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QCUT. These welds have been repaired and accepted by QC at time of QA testing.

Locations are recorded in millimeters:

D1-Y= 530mm~1373mm

D2-Y=2864mm~3720mm

### Magnetic Particle Testing

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 25% of the area previously tested by QC Ultrasonic technicians. This QA observed no rejectable indications at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

Locations of welds:

E4-PP103-L#1 (external)

E4-PP103-L#2 (external)

E4-PP103-L#3 (external)

E4-PP103-L#4 (external)

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 20% 11E/12E CJP bottom plate splice weld previously accepted by QC Magnetic Particle technicians. This QA observed no rejectable indications at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

Locations are recorded in millimeters:

D1-Y= 530mm~1373mm

D2-Y=2864mm~3720mm

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Clifford, William	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell, Bill	QA Reviewer

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